Remarks/Arguments

The § 112, second paragraph Rejection of Claims 17 and 18

The Examiner rejected claims 17 and 18 under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant ahs cancelled Claims 17 and 18 thereby rendering this rejection moot.

The § 103(a) Rejection of Claim 16

The Examiner rejected Claims 16-18 under 35 U.S.C. § 103 (a) as obvious over Farnsworth (US 1,832,974) in view of Atkins (US 1120432) and Faeber (US 3037557) and the admitted prior art, paragraph [0003] thru [0008]. Applicant has cancelled Claims 17 and 18 thereby rendering the rejection of those claims moot. Applicant respectfully traverses this rejection and requests reconsideration and passage to allowance of claim 16 as amended.

First, Applicant respectfully notes that the objection is based on a combination of four separate pieces of prior art. This is evidence of inventiveness, and not of obviousness. A person with ordinary skill in the art could know any of the pieces of prior art as cited against claim 16. However, such a person would not combine such pieces of prior art without inventive activity.

Mainly, the person with ordinary skill in the art of paper converting machines must deal with very large webs, in order to cut logs of rewound paper, for example toilet paper or tissue paper logs into shorter packages of facial tissue sheets.

The technical problem is to face with the flexion of large rollers. The longer a suction roller is, the more the suction roller can bend under its own gravity force. Flexion of a roller causes loss of traction of the paper, as well as loss of vacuum tightness.

A person with ordinary skill in the art could know Farnsworth (US 1,832,974) as closest prior art. This kind of roller is designed for a Fourdrinier machine, which is completely different from a rewinding, winding or interfolding machine. As shown in figure 1 of Farnsworth, only two concentrated groups of holes are provided in lateral portions of the roller. The roller in Farnsworth does not have the problem of flexion because the holes are not present in the central part of the roller. Even if the roller is bent under flexion, only the lateral holes are present that are not affected by the flexion. For this reason, a skilled person would disregard Farnsworth as starting point for a modification of the prior art in order to arrive at the invention.

A difference between Farnsworth and the invention is that in the invention the radial holes of the first tubular body extend for the entire length thereof. Another difference is that in the invention a slidable sealing element is provided that comprises a fixed portion as means for forming a longitudinal guide and a bar within said guide, wherein said bar can slide and resiliently engage with said interior surface of said first cylindrical tubular body to form said slidable sealing elements.

This solution is particularly advantageous because it compensates the flexion of the first cylindrical tubular body, in order to avoid a loss of vacuum suction force in the central suction holes.

The technical problem to solve is therefore to provide a very long suction roller (e.g.2-2.5 meters; about 6.5-8 feet) such that traction of a paper web is not affected by flexion in the central portion of the roller.

The person with ordinary skill in the art who faces with this problem cannot find the solution in Farnsworth, as stated above.

The person with ordinary skill in the art, could try to modify Farnsworth to solve this problem, and would not look at Atkins, who teaches a machine for suction of excess water in a paper making machine that has a longitudinal bar with a plurality of holes and slides against the inner surface of the tubular rotating roller. Moreover, for water suction Atkins uses a completely different solution.

Also, the person with ordinary skill in the art, in an attempt to modify Farnsworth to solve this problem, would not look at Faeber, who provides a rotary vacuum cylinder in order to apply tension in a continuous paper web, such as in printing or milling or laminating paper, that generates a very small amount of heat (see column 1 lines 30-35). The roller of Faeber leaves an uncovered portion of roller between two chambers. This portion is useful for cooling the sealing strips and the sealing frames.

A person with ordinary skill in the art cannot modify Farnsworth in view of Atkins and Faeber, and but also arrive at the invention, but also should modify Farnsworth in order to capture a sheet or web end, and adapt the machine to work as a rewinding, winding or interfolding machine of sheets of paper. None of the cited references teach or suggest this modification. Therefore, Applicant respectfully requests reconsideration and allowance of Claim 16.

Conclusion

Applicant respectfully submits that the present application is now in condition for allowance, which is courteously requested. The Examiner is invited and encouraged to contact the undersigned attorney if such contact will facilitate an efficient examination and allowance of the application.

Respectfully yours,

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